



March 17, 2014

**Sent via Electronic Mail**

Ms. Charlene Falco  
Illinois Environmental Protection Agency  
Bureau of Land, #24  
Federal Site Remediation Section  
Federal Facilities Unit  
1021 North Grand Avenue East  
Springfield, IL 62702

Re: MONTHLY PROGRESS REPORT FEBRUARY 2014  
INTERIM CONSENT ORDER ACTIVITIES  
DEPUE SITE, DEPUE, ILLINOIS

PEOPLE OF THE STATE OF ILLINOIS VS. HORSEHEAD IND., INC., ET AL.  
CASE NUMBER 95 CH 18  
SITE ID 0110300003 - BUREAU

Dear Ms. Falco:

This progress report is being submitted by ENVIRON International Corporation (ENVIRON), on behalf of the DePue Group. The attached revised report addresses the Interim Consent Order (ICO) activities conducted from February 1 through February 28, 2014 at the DePue Site. The report also indicates planned activities for the next reporting period.

This report complies with the requirements of the ICO, Section XVI, paragraph C, and Attachment 1, paragraph 12.

If you have any questions, please call.

Sincerely,

ENVIRON International Corporation

Scott Hayter  
Principal Consultant

**MONTHLY PROGRESS REPORT  
FOR  
FEBRUARY 2014**

**INTERIM CONSENT ORDER ACTIVITIES  
DEPUE SITE  
DEPUE, ILLINOIS**

Prepared For:

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**I OPERABLE UNIT 1: SOUTH DITCH SEDIMENT**

- Completed

**II. OPERABLE UNIT 2: PHOSPHOGYPSUM STACK****Summary of Work Performed during the Reporting Period:**

- Routine maintenance and monitoring activities continued at the phosphogypsum stack. These activities included pumping, observing and recording flow and water levels, maintaining storm water diversion systems (catch basins, dams, and discharge piping), measuring flow and collecting samples at the Outfall 002 when applicable, inspecting, monitoring and maintaining ground-water collection and pumping systems, inspecting and maintaining cover integrity and supporting and maintaining the Health and Safety program.
- The center pivot irrigation system was shut down for the winter season on November 12, 2013.
- As of March 3, 2014, 137.7-million gallons of water had been discharged through the treatment wetland. Flow rates and discharge are logged daily, Monday through Friday and reported monthly to the Illinois Environmental Protection Agency (IEPA).
- The treatment wetland sprinkler system was shut down for the winter season on November 22, 2013.
- No samples were collected from Outfall 002 during February 2014, as the outfall was frozen throughout the period.
- Single well pumps tests were completed for the four Intermediate Sand wells installed in December 2013, north and northwest of the Phosphogypsum Stack on February 8, 2014.
- Continued preparation of data report and Phase I/II/III Investigation Report Addendum for the Intermediate Sand.

**Summary of Work Planned for the Next Reporting Period:**

- Continue routine maintenance and monitoring activities within the Phosphogypsum Stack system.
- Continue preparation of the Phase I/II/III Investigation Report Addendum for the Intermediate Sand.
- Complete data report for Intermediate Sand investigation field activities completed in December 2013.

**Problems Encountered/Resolved:**

- None

**Revisions to Scopes of Work and Schedules:**

- None

**Changes to Key Personnel, Consultants, Contractors, or Subcontractors:**

- None

### III. OPERABLE UNIT 3: PLANT SITE

#### Summary of Work Performed during the Reporting Period:

- Phase II Remedial Investigation (RI) Work Plan Implementation
  - The DePue Group submitted the Final Phase II RI Report on February 14, 2014.
- Risk Assessment
  - The DePue Group received IEPA comments on the revised OU3 risk assessment approach on February 7, 2014.
- Interim Water Treatment Plant (IWTP) Operations
  - The IWTP treated 679,515 gallons of water during February 2014. The influent and effluent data are included in Attachment 2:
    - Approximately 5,250 pounds of zinc were removed.
    - Approximately 260 pounds of manganese were removed.
    - Approximately 280 pounds of copper were removed.
  - The following activities were completed at the IWTP:
    - Routine operation and maintenance.
- Site Operations
  - The most recent Operable Unit 3 (OU3) site fence inspection was completed on February 24, 2014. There were no issues noted, all fencing was found secure and “No Trespassing” signs were intact. No repairs were necessary.

#### Summary of Work Planned for the Next Reporting Period:

- Risk Assessment
  - The DePue Group will continue to work with IEPA to develop the approach for completing the OU3 risk assessment.
- Interim Water Treatment Plant
  - The DePue Group will continue routine operation and maintenance at the IWTP.

#### Problems Encountered/Resolved:

- None

#### Revisions to Scopes of Work and Schedules:

- None

#### Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- None.

### IV. OPERABLE UNIT 4: OFF-SITE SOIL

#### Summary of Work Performed during the Reporting Period:

- Off-Site Soil Design Study
  - The DePue Group is preparing the OU4 Pilot Study Soil Sampling Report.

## Summary of Work Planned for the Next Reporting Period:

- Off-Site Soil Design Study
  - The DePue Group will continue preparing a report documenting the results of the Pilot Study.
  - The DePue Group will revisit eight properties to evaluate for the potential presence of bare areas once the snow cover clears.

## Problems Encountered/Resolved:

- None

## Revisions to Scopes of Work and Schedules:

- None

## Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- None.

**V. OPERABLE UNIT 5: DEPUE LAKE AND FLOODPLAIN**

## Summary of Work Performed during the Reporting Period:

- DePue Lake RI
  - The DePue Group awaits a response to the Sediment Preliminary Remediation Goal (PRG) Technical Memorandum submitted on December 23, 2013.
  - The DePue Group is waiting for confirmation from IEPA on the approach for finalizing the OU5 Human Health Risk Assessment (HHRA).

## Summary of Work Planned for the Next Reporting Period:

- DePue Lake RI Report
  - The DePue Group will continue to work with IEPA toward finalizing the OU5 risk assessments.

## Problems Encountered/Resolved:

- None

## Revisions to Scopes of Work and Schedules:

- Additional requirements necessary to address OU1 (South Ditch Sediments), if any, will be completed as part of the scope of work for OU5 (DePue Lake and Floodplain).

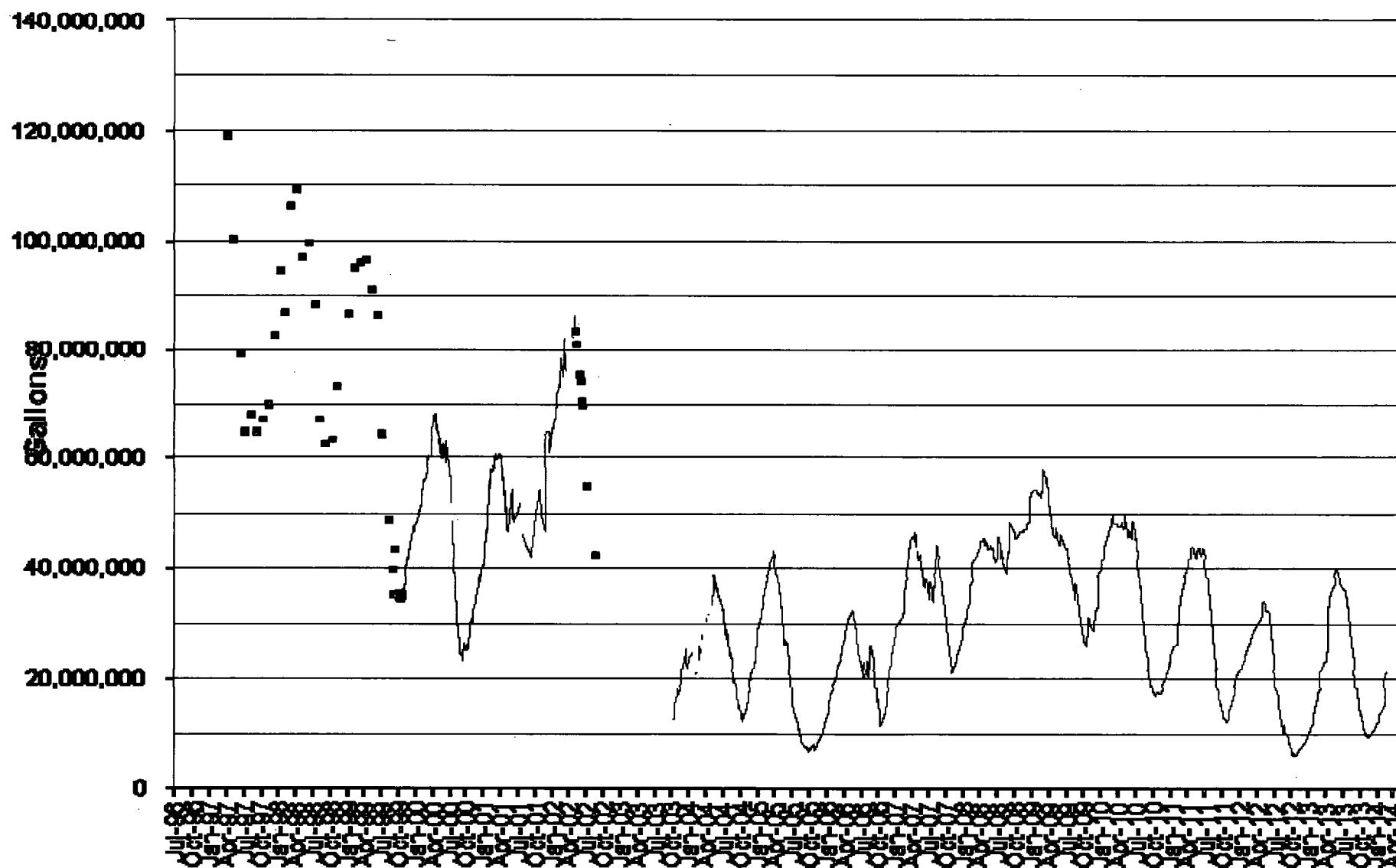
## Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- None.

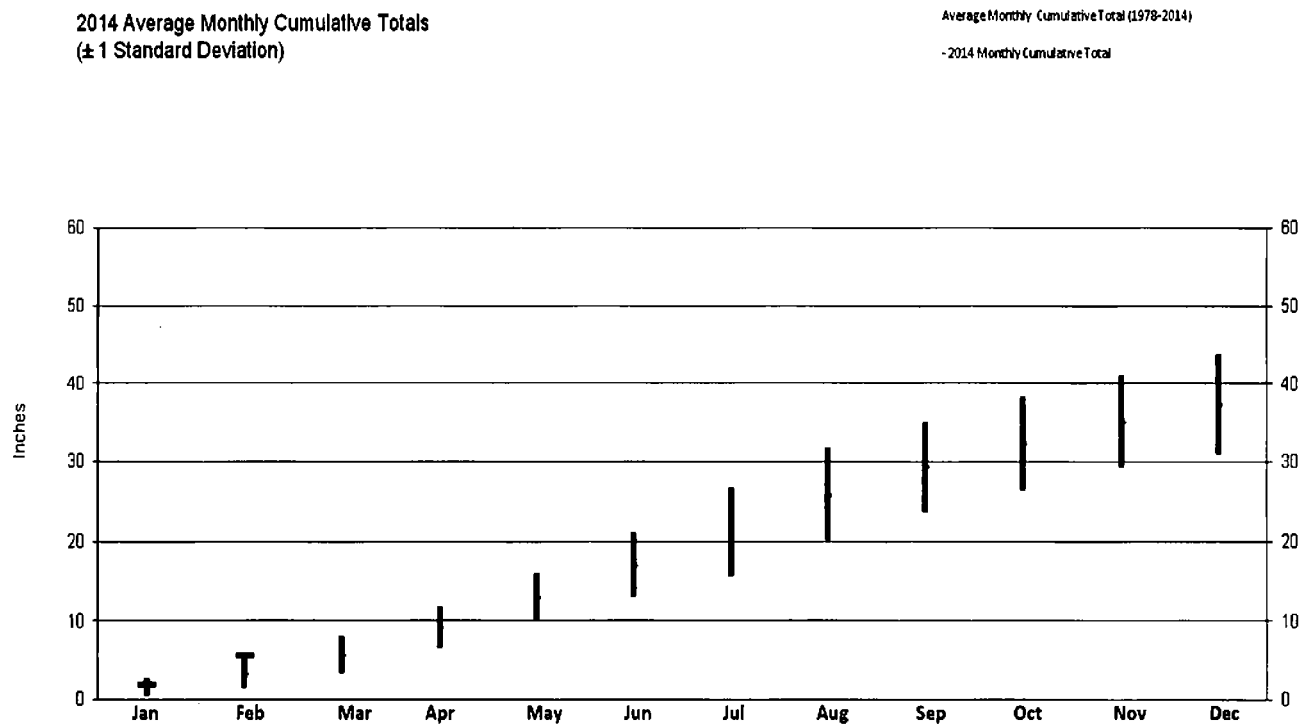
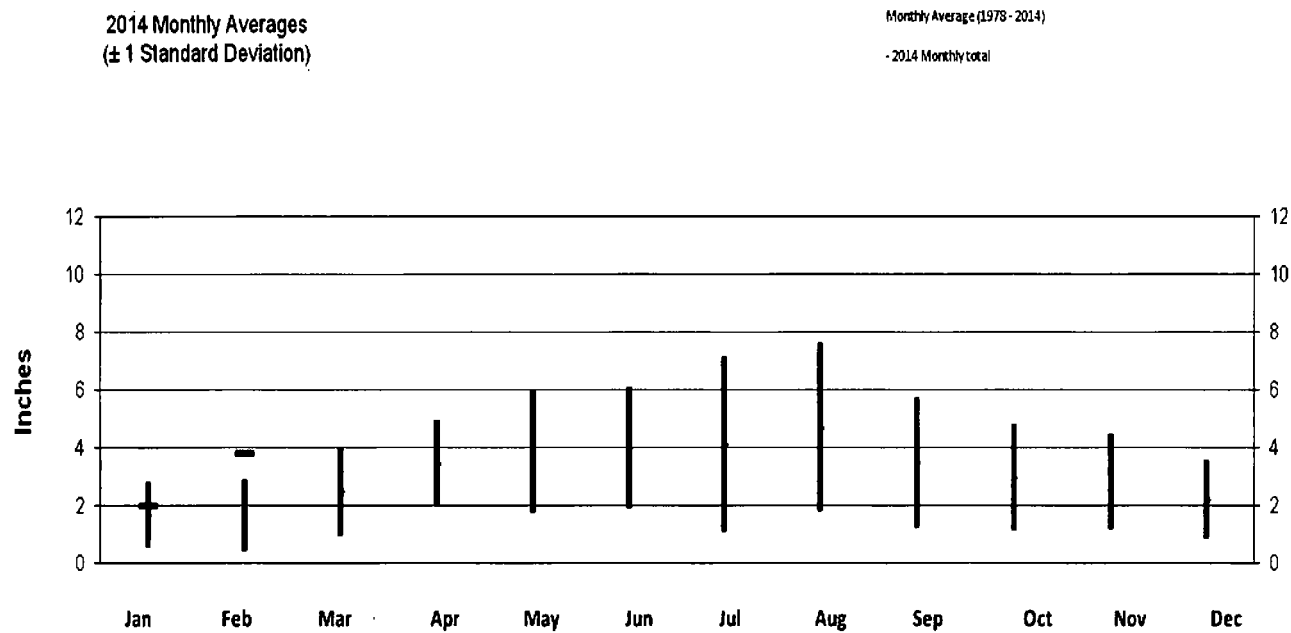
## **Attachment 1**

### **Gypstack**

Surface-Water Volumes within the Phosphogypsum Stack System



## 1978 Through 2014 DePue Site Precipitation





Analytical Results for Samples Collected at the 002 Outfall (mg/L)

Sample Collection Date	pH (S.U.)	Total Dissolved Solids (mg/L)	Total Phosphorus (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Ammonia- Nitrogen (mg/L)	Unionized Ammonia (mg/L)
1/13/14	6.18	295	0.683	0.430	94.2	>0.0600	>0.00100
<b>Former Permit IL 0032182 Limits</b>	6.5 – 9	1,000	Report	1.4	500	15	0.04

**Attachment 2**  
**Summary of Sampling Results**  
**DePue Interim Water Treatment Plant**

Interim Consent Order Report  
February, 2014  
Summary Of Analytical Results  
DePue Interim Water Treatment Plant

Influent Data (mg/L)<sup>1</sup>

Date	TSS	Cadmium	Copper	Iron	Manganese	Nickel	Lead	Zinc	pH (std units)	Lift Station Flow (gpm)
01/07/14	50	1.8	50	2.0	53	1.1	<1.0	1,000	5.88	10
02/04/14	31	1.4	51	4.1	46	<1.0	<1.0	930	5.98	10
YTD Average	41	1.6	51	3.1	50	1.1	1.0	965	5.93	10

Notes:

1. Values preceded by "<" were not detected greater than the laboratory method detection limit shown.

**Interim Consent Order Report**  
**February, 2014**  
**Summary Of Analytical Results**  
**DePue Interim Water Treatment Plant**

**Effluent Data (mg/L)<sup>1</sup>**

Date	TSS	Cadmium	Copper	Iron	Manganese	Nickel	Lead	Zinc	pH (std units)
01/07/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	7.44
01/14/14	5.6	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	7.00
01/21/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.18	7.04
01/28/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.29	7.00
02/04/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.39	7.20
02/11/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	6.96
02/18/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	7.00
02/25/14	<4.0	<0.02	<0.10	<0.10	0.12	<0.10	<0.10	0.23	7.04
<b>YTD Avg</b>	4.2	0.02	0.10	0.10	0.10	0.10	0.10	0.26	7.09
<b>Feb Avg</b>	4.0	0.02	0.10	0.10	0.11	0.10	0.10	0.27	7.05
<b>Feb Max</b>	4.0	0.02	0.10	0.10	0.12	0.10	0.10	0.39	7.20

**DISCHARGE LIMITS (mg/l)**

	TSS	Cadmium	Copper	Iron	Manganese	Nickel	Lead	Zinc	pH-std units
<b>Daily Max</b>	30	0.30	1.00	4.00	2.00	2.00	0.40	2.00	6-9
<b>Monthly Avg</b>	15	0.15	0.50	2.00	1.00	1.00	0.20	1.00	6-9

**Notes:**

1. Values preceded by "<" were not detected greater than the laboratory method detection limit shown.